Future Visioning for pro-poor Disaster Risk Reduction in Tomorrow's Cities

ACTIVITIES TOOLBOX

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Tomorrow's Cities Disaster Risk Hub

Document elaborated by the international team
of Work Package 1 - Future Visioning

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Tomorrow's CITIES
Urban Risk in Transition

Introduction

This document sets guidelines for Future Visioning within 'Tomorrow's Cities Decision Support Environment'. It is meant to guide the elaboration, monitoring and evaluation of visioning approaches in the cities that are joining the research hub. It may also serve as an evaluation and learning tool for cities, communities and researchers generally interested in future visioning and scenario building techniques.

Tomorrow's Cities Urban Disaster Risk Hub is an interdisciplinary and global programme funded by the UK Research and Innovation (UKRI) Global Challenges Research Fund (GCRF). It has the mission to reduce disaster risk for the urban poor in cities where stark inequalities and socio-spatial vulnerability add layers of complexity to disaster risk reduction (DRR).

Tomorrow's Cities Decision Support Environment (TCDSE or DSE) is the main framework guiding the work of cities across the hub. It has been developed with the intent to democratise knowledge and tools related to DRR - influencing decision-making, and building agency and capacity for urban residents and communities that experience disaster risk, particularly those who are disproportionally impacted by disasters and that are historically excluded from planning spaces. The umbrella term 'urban poor' refers to such exclusionary processes. The DSE opens decision-making spaces within and across cities "to explore novel evidence-based solutions to difficult policy challenges" [i].

Future Visioning is the first stage of the DSE. It both introduces participants to the framework and develops conversations that will feed the whole framework and ensure its continuity. Whilst this module is more qualitative and normative in nature, it should enable discussions and the delivery of products are complicated by the realities of urban trends and conditioned by the possibilities and uncertainties of disaster risk.

One of the fundamental ethos of Tomorrow's Cities is creating a critical pedagogical environment for people empowerment and capacity building towards risk informed planning. In this context, critical pedagogical means a mode of learning from and about risk that increases the legitimacy and capacity of hitherto marginalised stakeholders and their ways of being and knowing the city.

Drawing on this, future visioning unfolds on the basis of four main action points, which are later translated as a trajectory that guides the work of cities.

First, this approach aims to support a diverse range of stakeholders, placing socio-spatial difference and conflict as a crucial challenge for inclusive and pro-poor risk informed planning.

Second, future visioning works to harness aspirations and values for future cities, making risk-informed planning more normative and transformation-oriented rather than just a defensive practice.

Third, this approach focuses on translating conceptual visions into qualitative spatial guidelines that will inform plans and visioning scenarios. That is, it works to materialise visions without losing track of values.

Finally, it fosters discussions of how to turn visions into risk-oriented action, which will feed policy bundles in the hub. It encourages stakeholders to think of policies not as one-off actions led by one urban actor, but as a complex set of incremental decisions and practices that involve multiple stakeholders and sectors.

(i) Galasso et al., 2021

Methodological notes & ethos

The core of this toolbox is a set of activities that builds on conventional future visioning methods, expanding them for disaster risk reduction-oriented conversations. Such expansion is inspired by novel methods from arts and humanities and from decolonial and feminist approaches that aim to navigate subjective experiences and tackle power imbalances in participatory planning spaces.

Tomorrow's Cities approach to visioning builds a trajectory that goes from a critical selection of representative stakeholders to a discussion of incremental risk-oriented policies, passing through essential debates about diverse aspirations for the good future city and their spatialisation. The guidelines for the conduction of activities – to be chosen and adapted by each city – are complemented by illustrative examples that facilitate the visualisation of how conversations may unfold and deepen. As it will be mentioned several times in the document, these activities are open suggestions, for cities have spatial, logistical and political specificities to deal with. Yet, there are important milestones designed to ensure consistency across cities in the hub.

Before the presentation of activities, this document positions future visioning within the Tomorrow's Cities Decision Support Environment framework. There is an infographic which illustrates how Future Visioning contributes to the broad functioning of the hub, although it should be noted that, in practice, different components overlap.

Then, the document discusses conventional understandings of and approaches to future visioning, justifying the need for Tomorrow's Cities specific approach and the intrinsic rationales embedded in it. Two main knowledge sources base such discussion. The first is a critical analysis of a comprehensive literature review on future visioning in a context of urban planning, and on future techniques that include future visioning or connect it with scenario building. The initial scoping of the literature was not restricted to disaster risk reduction debates, but as much as possible there was an attempt to look at how visioning was framed in urban contexts that involved a high degree of uncertainty and complexity. Second, findings from the literature were analysed against the reported experience of city partners from the hub that had already conducted activities which resembled future visioning.

As part of Tomorrow's Cities intention to democratise knowledge about risk and build agency and capacities for disadvantaged groups, our team aimed for a document that was rich, informative and with solid foundations, but that at the same time was interactive and easy to read. For instance, as much as possible, dense text was converted into infographics and images of fast apprehension. By doing so, this toolbox aims to bridge a persistent gap between social and physical sciences that mark conversations about disaster risk, and between so-called 'lay' and 'expert' groups – a false binary which, we believe, in reality speaks to a myriad of different knowledges.

How to use this toolbox

The main intended audience for this document are the stakeholders from new cities joining the research hub in 2022, that is, those contexts in which no future visioning approaches have been implemented using this particular framework.

Yet, we invite all urban actors or cities that have already engaged in visioning or similar experiences to use the resources in this toolbox as an entry point for critical learning or monitoring and evaluation of existing practices.

Readers will notice that most activities and steps come with preliminary 'critical questions' that encapsulate the main intention while supporting a reflexive engagement with the process.

CONTEXT

The Decision Support Environment - DSE

As the name suggests, Tomorrow's Cities Decision Support Environment is a socio-technical space that creates favourable conditions so decision-making happens in a pro-poor, inclusive and pedagogical way. It connects stakeholders from different backgrounds and helps to grant legitimacy to voices that are usually not part of disaster risk reduction conversations. It further helps to democratise knowledge and tools related to disaster risk, usually concentrated in the hands of few. As disaster risk affects all urban residents, albeit in different ways, the DSE considers that all stakeholders are experts in some way (with different knowledges about disasters), and may contribute to conversations towards risk-informed planning. In Tomorrow's Cities, such planning focuses on urban areas that are less developed - i.e., prone to expansion and growth.

The DSE has five main components or stages, which research-wise are framed as 'Work Packages'.

The first component is future visioning - to be unpacked throughout this document. The second stage is called 'visioning scenarios'. This is when different visions are turned into socio-spatial data that feeds geographic information system (GIS) scenarios. The third component of the DSE is computational based. Here, scenarios are subject to multi-hazard modelling that creates different impact metrics, so risk is collectively evaluated. For example, participants will have a sense of which options lead to more human casualties or more infrastructural or environmental damage. Based on such information, stakeholders move to the fourth component of 'risk agreement'. This is when one of the scenarios (or a combined version) is chosen to inform future planning. Because the DSE is an iterative process, participants may disagree and come back to scenarios until an alternative that is minimally satisfactory to all is achieved. Finally, the 'scenario assessment' stage is when the consequences of decisions are assessed. This means evaluating the outcomes of each DSE iteration, with a particular focus on the welfare and exposure of the urban poor.

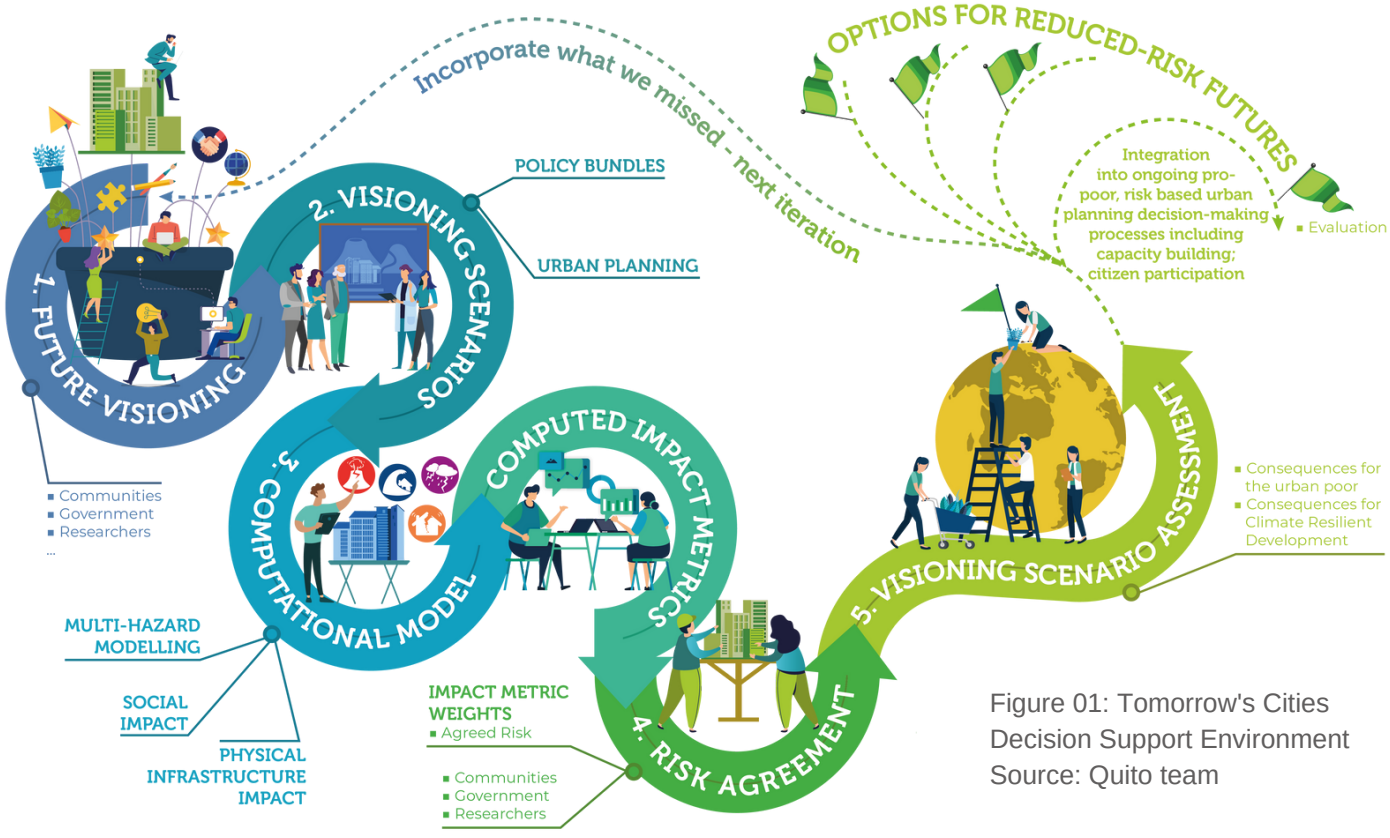

Figure 01: Tomorrow's Cities Decision Support Environment
Source: Quito team

FUTURE VISIONING

for Pro-poor Disaster Risk Reduction

Visioning for Disaster Risk Reduction

In Tomorrow's Cities, future visions are encapsulations of aspired yet plausible futures oriented towards reducing disaster risk for the urban poor. Future visioning is the process of collectively imagine such futures and adapt them according to the complexities and uncertainties attached to disaster risk in a given urban context. This entails mixing normative, exploratory and predictive future-thinking – a hybrid way of thinking that permeates the whole DSE but that is introduced during the future visioning stage.

Before explaining the workings of this approach, it is important to state that the practice of imagining or speculating about the future is not new. From religious scriptures to the writings of Plato or Thomas Moore, many works have been dedicated to envisioning the contours of tomorrow's cities (1). Yet, the most common and contemporary format of visioning is inserted in a context of postmodern planning and policy making. It took shape between the 1980's and 1990's (2), when the phenomenon of urbanisation was substantially conditioning human development and the environment. At that moment, many national states were experiencing processes of decentralisation, and ideas about strategic and participatory planning started to gain traction in urban governance and be integrated with visioning practices (3).

Rapidly, urban visions became key instruments for communicating ideas about the future of cities, which are usually more optimistic. That is, urban visions are usually synthetic ideas about how future cities should be, which this document calls normative future thinking. In participatory experiences, normative future visioning usually captures social aspirations, desires, dreams, and norms. This is a more affective and subjective way of thinking about the future, which entails the use of qualitative methods. Backcasting (4) is a methodological approach commonly explored in this type of visioning exercises. It is composed of two macro-stages. First, participants develop the vision-synthesis. Then, they build a trajectory that meets such vision.

Although promising, normative future thinking is hardly effective if used in isolation. Asking questions about how the future should be without a meaningful assessment of how the present is and where are trends taking cities can lead to over idealistic or little pragmatic planning (5). It is therefore common practice to combine questions about aspired futures to questions about the drivers and conditioning factors of urban development (6). This helps to identify barriers and enablers to a desired end state.

Still, in contexts that need substantial inputs from the physical sciences such as disaster risk, these questions are insufficient. Whilst cities have been moving away from purist forms of scientific planning (7), quantitative and computational instruments and methods could be useful to engage in informed decision-making about the future (8).

For example, models of climate-induced hazards may help to predict the size and intensity of floods (8), especially if connected to data on the infrastructural and social profile of the city. Models like this are quantitative in nature and connected to an umbrella approach called forecasting (9), which is a predictive way of thinking. In isolation, these would be questions about how the future will likely or probably be if current trends continue.

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(1) Dixon et al., 2018

(2) Shipley 2000, 2002.

(3) Shipley & Newkirk, 1999; Shipley et al, 2004.

(4) Dreborg, 1996.

(5) Duinker & Greig, 2007; and Iwaniec et al., 2020

(6) Chakraborty et al., 2011

(7) Sandercock, 1998.

(8) Wilkinson & Eidinow, 2008.

(9) Sheppard et al., 2011.

(10) Lemp et al., 2008.

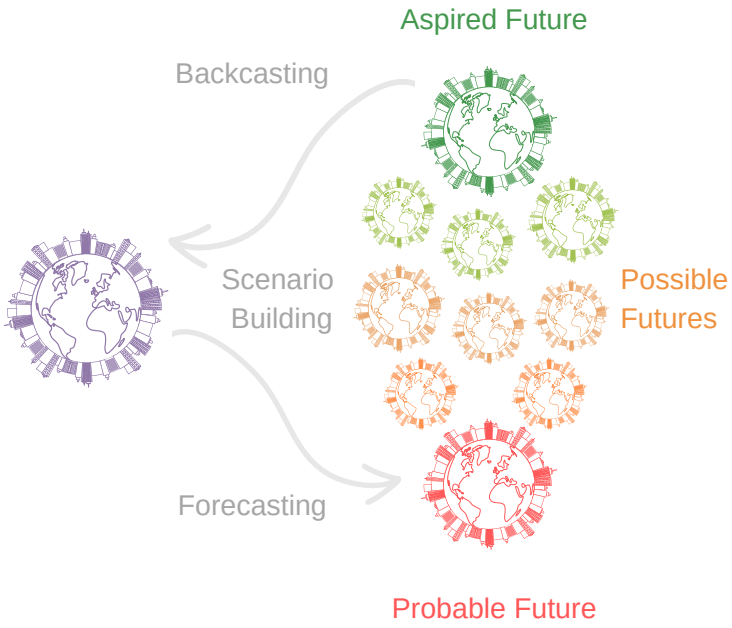


Figure 02: Umbrella future approaches.
Source: WP1 international team.

Epistemically, backcasting and forecasting are opposite approaches, as they depart from different points - the former from the future and the latter from the present on the basis of past trends – besides relying on different types of data. Yet, contemporary studies have highlighted the complementarity of the two, for the gaps of one approach are filled by the potentials of the other (11).

Still, a simple juxtaposition of backcasting and forecasting is not enough to respond to the challanges imposed by multi-hazards. Mostly because neither normative nor predictive thinking account for the complexities and uncertainties attached to urban and natural environments (12).

An overly normative approach might be dangerous because one hardly would aspire to a risk-based future, so negative but real conditions may be disregarded. Conversely, a simplified predictive approach may create the illusion that the future is somehow controllable, stable (13), and that only scientists and intellectual elites can discuss it, when policy and planning in practice can be highly subjective and power-laden (14).

Due to the failability of forecasting, predictive models are often developed through exploratory thinking (15).

Rather than relying on a single probable future, a range of possibilities is presented as different plausible scenarios, which are combinations of relatively unpredictable events and more attainable decision-making (16).

Exploratory thinking (17) is the basis of many future approaches, and it is also used in Tomorrow's Cities with the help of GIS and visualisation tools. Such thinking relies on questions about how future cities could be.

But whilst the combination of exploratory and predictive thinking is essential to deal with risk, the combination of these two formats with the first – normative thinking – may be even more meaningful. After all, in practice, questions about how future cities should be will not be answered the same way by different social groups, sectors and identities (18). Urban and risk experiences are different, and so are aspirations. So, in the context of the DSE, exploratory thinking is shaped by both environmental uncertainties and by social diversity.

The mixing of those three rationales – normative, predictive and exploratory – leads to a hybrid way of thinking. This is a future-oriented thinking that simultaneously navigates different questions (should, could, probably will) for meaningful visioning and further risk-informed planning. The stage of future visioning does not have the capacity nor the intent to deal in depth with all three rationales. It purposefully starts with and puts emphasis on the normative one due to a need to unpack values. Yet, it introduces hybrid thinking through a trajectory of methods that touch on these different questions.

(11) See reference 10; and Uwasu et al., 2020.

(12) See reference 6.

(13) Lord et al., 2016.

(14) Arnstein, 1969; Mccan, 2001; and Gaffikin & Sterrett, 2006.

(15) Bizikova et al., 2011.

(16) Ratcliffe & Krawczyk, 2011.

(17) van Vliet & Kok, 2015.

(18) Uyesugi & Shipley, 2005

Future-Oriented Thinking

Infograph: The rationales underpinning future visioning methods
Source: WP1 team

N

Normative thinking

Based on social aspirations and norms
Asks ‘how the future should be’.

E

Exploratory thinking

Seeks plausible futures that mix possibilities and constraints
Asks ‘how the future could be’

P

Predictive thinking

Based on trends and past events
Asks ‘how the future will likely/probably be’
(if trends continue).

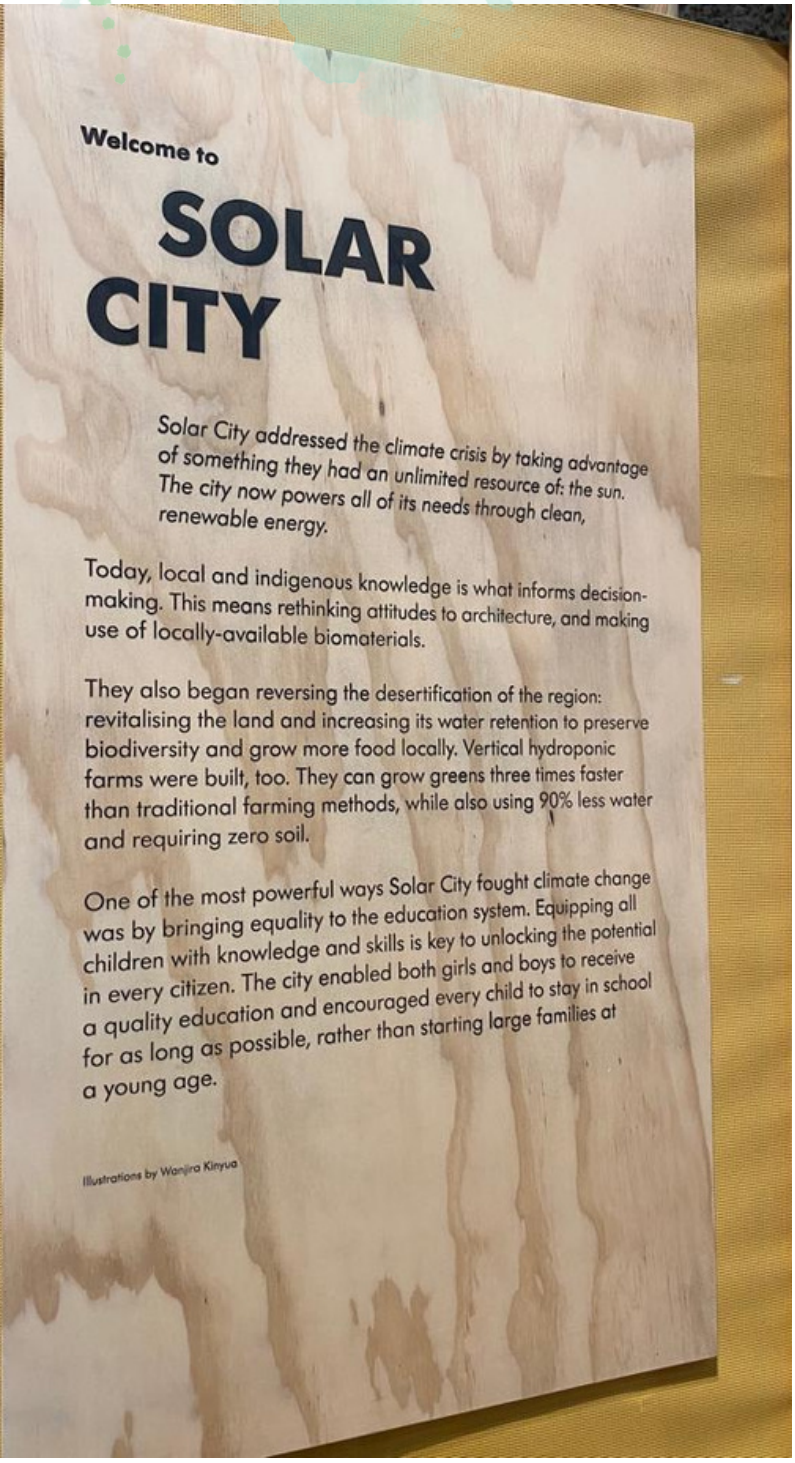
H

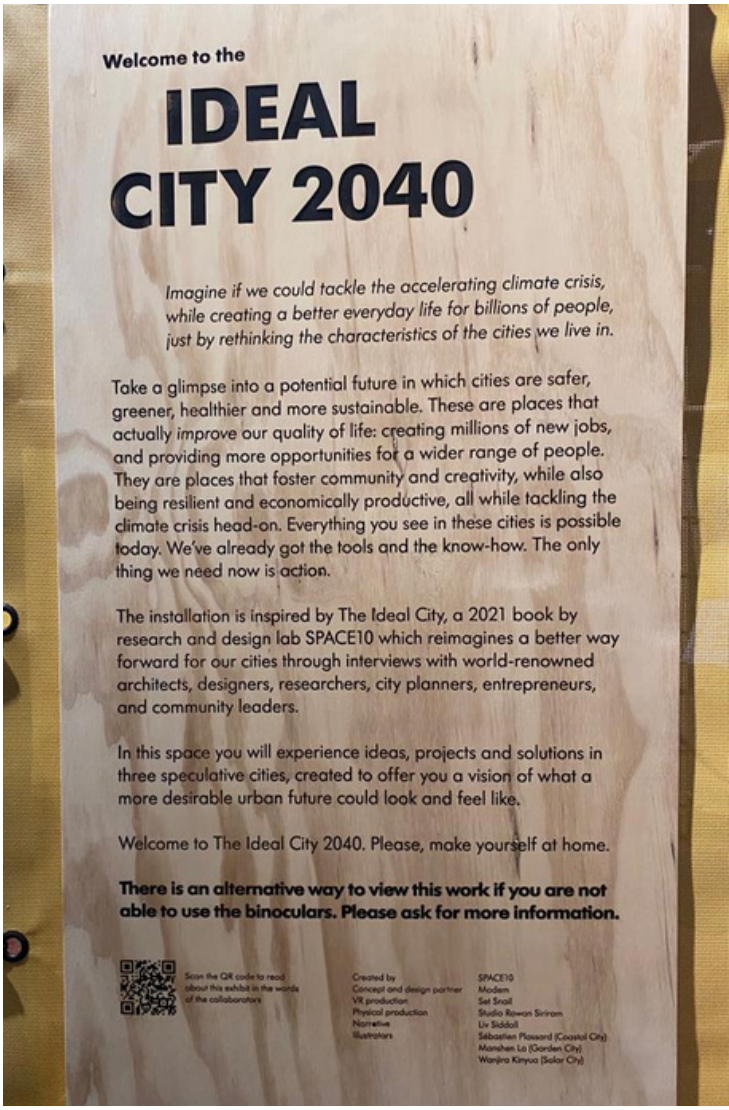
Hybrid Thinking

Based on notion that no future thinking exists in a pure form. Aspiratons, explorations and predictions usually appear in a mixed form, although emphases change.

Examples

Normative future thinking





Figures 03/04: "Our Time on Earth" exhibition. Barbican Centre, London, UK. Photo: Thaisa Comelli, 2022.

Examples

Exploratory future thinking

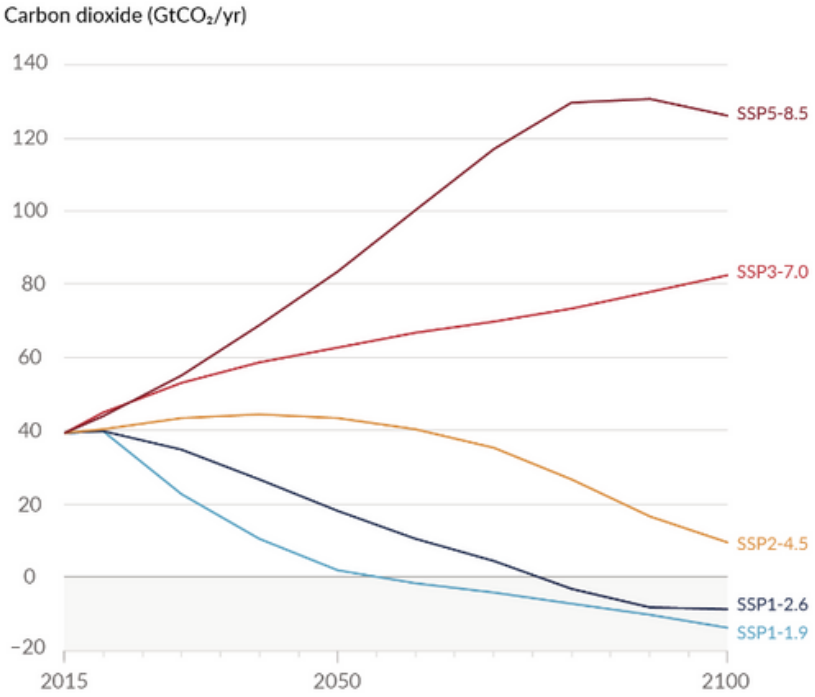


Figure 05 (right hand side): Future annual emissions of CO2 across five illustrative scenarios.
Source: IPCC Report, 2021.

Figure 06 (bottom): The coastal community of Delta (Canada) and different responses to climate change - 1 simulates no adaptation and 4 'deep sustainability'.
Source: Bizikova et al., 2011.

Examples

Predictive future thinking

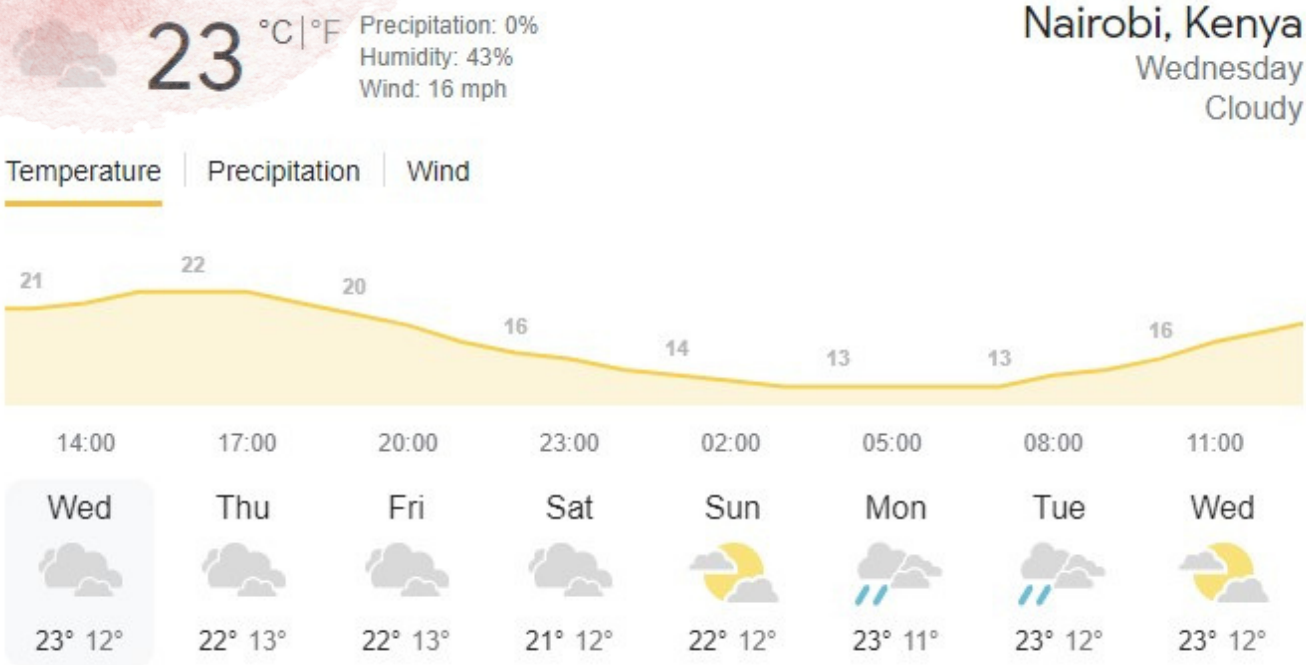


Figure 07: Weather Forecast in Nairobi, Kenya. Illustrates a predictive way of thinking about the future. Source: Google Weather.

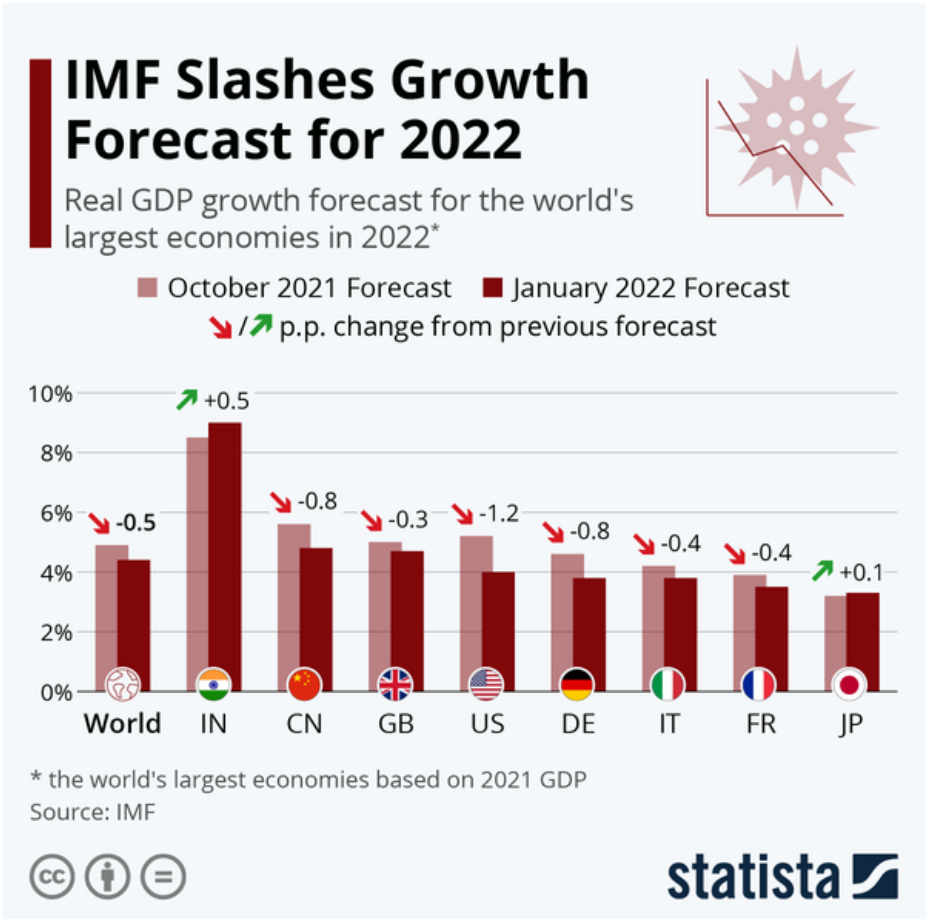


Figure 08: Economic forecasts are also common predictive ways of thinking that draw on past and current trends. Source: Statista.

The DSE as hybrid future thinking

Infograph: The focus of each work package in relation to future thinking
Source: WP1 team

1 Future Visioning

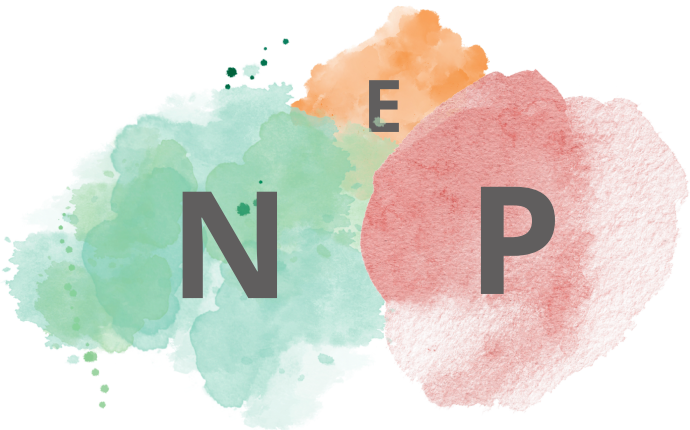
Normative thinking: focus on aspirations and values

2 Visioning Scenarios

Exploratory thinking: Focus on development of alternative scenarios

3 Multi-Hazard Modelling

Predictive thinking: Focus on urban trends & multihazard data



4 Risk Agreement & Assessment

Agreement balances normative & predictive - based on explorations

Why hybrid future thinking in visioning?

One could argue that, in practice, these three forms of future thinking cannot exist in a pure and isolated way. If someone is prompted to imagine an ideal future, it is natural to assume that alternative possibilities, as well as constraints produced by past and future trends, will be embedded in that vision. Yet, different questions and prompts might lead to an emphasis on a particular way of thinking.

The Decision Support Environment entails a trajectory of risk-informed planning which starts with an emphasis on normative thinking, and later unfolds to an emphasis on exploratory and predictive thinking during the computational modelling stages. Yet, it is important that future visioning touches – even if superficially – on all three types of future-oriented thinking in its own trajectory. First, because this is the first moment when different stakeholders will gather to discuss collective (not individual) visions for the future. Being exposed to difference and dealing with it means to recognise that an ideal version of the future (single and static) is unfeasible in practice. Taking diversity seriously entails embracing that different positions and views will lead to different scenarios for the future.

Second, because in this project future visioning aims to engage with planning that reduces disaster risk for the urban poor. This is a field that must deal with uncertainty and the unpredictability of hazards, as well as with trends and probabilities that orient decision-making. Focusing just on normative thinking during future visioning and leaving scientists to think of alternatives and probabilities would reinforce epistemic inequalities that impact decision-making on the ground.

Asking people about a desired/aspired future without providing the tools for exploring diversity, uncertainty and probabilities is robbing urban residents of the possibility to reflect for themselves on how risk shapes aspirations and the decisions that arise from them. Bringing risk-related exploratory and predictive thinking into visioning is therefore preparing the ground for a truly critical and pedagogical decision support environment

Tomorrow's Cities approach to future visioning is therefore a space for stakeholder engagements with an emphasis on normative thinking, but with an explicit introduction of elements from exploratory and predictive thinking. It is a trajectory that starts with broad discussions about a desired future, moving onto a translation of normative ideas into spatial plans that take probable and possible futures into account. It finishes with an outlining of policies that complement plans and trace a pathway from the real to what is both possible and desired. Such trajectory is detailed through the activities in this toolbox.

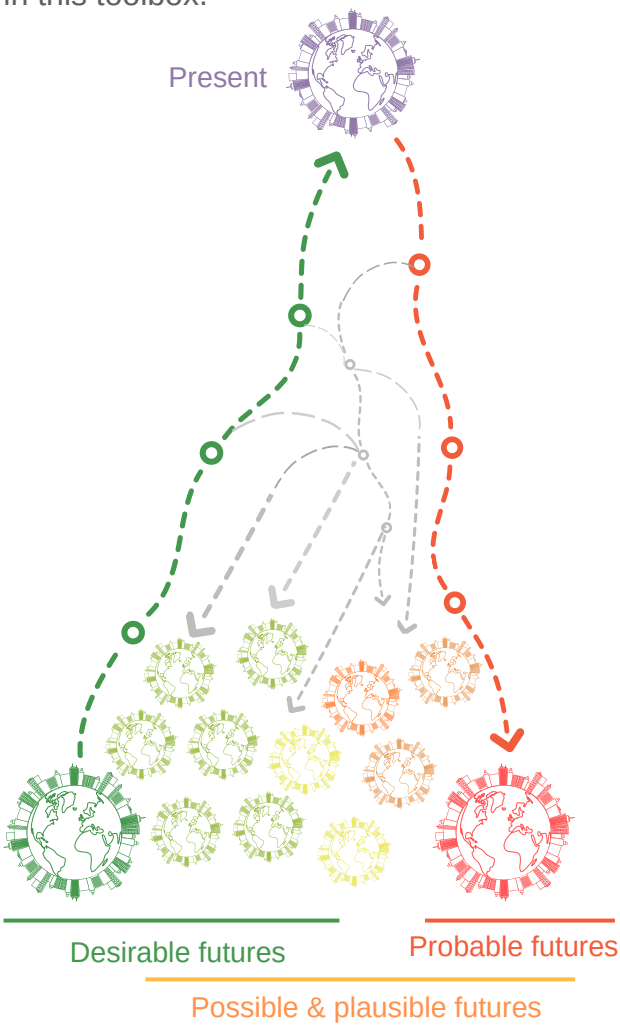


Figure 09: illustrates how the introduction of predictive and exploratory thinking contributes to a visualisation of a range of futures which are both plausible and desirable. Source WP1 team.

Whose vision counts?

The emphasis of Tomorrow's Cities future visioning on normative ideas means that discussions will often be politically charged, especially if diversity is indeed embraced. This means that, as much as possible, visions should be diverse like the urban realities they represent. If a single and overly consensual vision is pursued, visioning risks falling into already criticised experiences marked by global and local elite capture - when both process and solutions are little sensitive to the realities, capacities and visions of the urban poor (19) - and by a lack of connection with social justice and sustainability principles (20).

In diverse arenas, aspirations and ideas for the good city might converge, but because urban and risk experiences are often too distinct, they will often lead to different priorities or actions that are mutually exclusive. In other words, valuing diversity may lead to conflictive proposals, which is not uncommon in participatory planning processes (21).

For example, experiences of risk and impacts of hazards on migrant renters or ethnic minorities living in informal settlements prone to flooding and those of property owners living in formal neighbourhoods with networked infrastructure and private insurance are probably different.

Even within precarious or informal settlements, diversity matters. The everyday and risk experiences of women, children, or disabled persons (to name a few intersecting vulnerable identities) may vary significantly. In this illustration, inspired by common challenges in the global South, wealthier urban residents could blame low-income populations or migrants for settling in hazardous lands and increasing overall risk in the city – a view that could lead to a specific set of planning actions. If this group's vision relies on an aspiration to live in a clean city more responsive to risk, it might entail tighter urban regulations to protect environmentally sensitive areas, which could lead to the eviction of the poor from spaces such as riverbanks.

Meanwhile, migrant renters and informal dwellers may also aspire for a similar city, but their vision statement and translation into spatial and policy solutions will probably be different. They could claim, for example, for more social housing stock, investments in infrastructure and improved upgrading policies. Within this group, mothers might aspire for more child-oriented facilities, and disabled persons for easier access to escape routes.

The above example is not meant to generalise the aspirations and needs of social groups and identities. It only illustrates how visions could have convergence points but still be different when unpacked. Such unpacking is nonetheless fundamental because the exploration of social conflicts and the alternative future options they entail is an essential component of meaningful decision-making (22). Yet, when ideas clash, whose vision counts (23)?

Here, it is important to recall the four principles guiding this approach to future visioning: focus on disaster risk, on the pro-poor, on co-production and on critical pedagogies. The latter two principles are connected to participatory planning but do not necessarily entail consensus. Co-production assumes that different stakeholders will be willing to work together and find some convergence points towards shared concrete outcomes (24). This process starts in future visioning but is only consolidated in the risk agreement stage of the DSE. It is also about deepening groups' understandings

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(19) Ballard et al., 2017; Marx, 2011; Watson, 2014; and Wrag & Lim, 2015.

(20) John et al., 2015; Listerborn, 2017.

(21) Ploger, 2004; Legacy et al., 2019.

(22) Robinson, 2008.

(23) Harrison, 2006.

(24) Castan Broto et al., 2022.

of risk and refining their positioning in planning because of the exchanges between views and knowledge systems. This is what could make visioning a critical pedagogical process (25) that is emancipating to all, but particularly to those who have been historically excluded or marginalised from 'technical' risk-related conversations.

Furthermore, in Tomorrow's Cities future visioning should be risk-oriented and pro-poor, which means that stakeholder groups should be able to justify why their visions are reducing risk to most urban dwellers in a particular area, but particularly to disadvantaged groups. In sum, when it comes to whose vision counts, all should have the 'right to [express and consolidate] visions' (26), but the prioritised solutions should be consciously inclusive and pro-poor.

There are no strict rules on how to design and conduct visioning, and this document only sets guidelines that should be adapted to each context. Yet, we recommend that city teams and facilitators incentivise a discussion environment which is open and imaginative (27), but in which principles and ground rules are clear and pre-stated.

Also, because pre-existing power imbalances often hinder the participation of marginalised or disadvantaged groups in participatory arenas, conducting visioning in different places and splitting groups might be a good option to preserve socio-spatial diversity, at least until visions and justifications are consolidated. Whilst dozens of scenarios might not be feasible as a result of such visions and strategies to narrow down options are needed (28), having a range of options is important so participants learn from and discuss each other's visions.

If or when conflicts arise within groups, it might be healthy to keep them alive as pedagogical exercises. This is engaging in a process of 'agonistic planning', where a democratic environment shapes political adversaries rather than social enemies (29). Justifying rationales and motivations behind a vision might be a healthy way to move forward in the DSE, although this should be done with cultural and political sensitivity so social relationships are not deeply harmed by conflict.

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(25) Freire, 2020 [1968].

(26) Davis & Hatuka, 2011.

(27) Balug, 2019.

(28) See references 9 and 13.

(29) Kapoor, 2002.

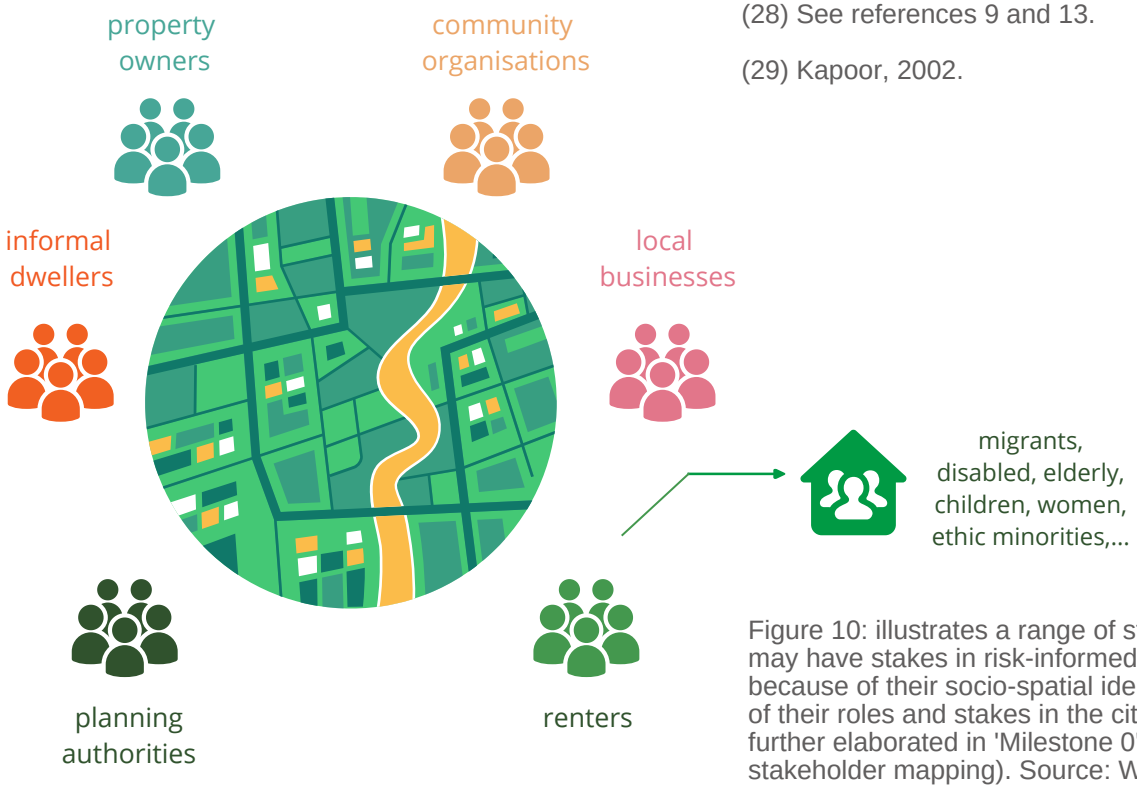

Figure 10: illustrates a range of stakeholders that may have stakes in risk-informed planning, either because of their socio-spatial identities, or because of their roles and stakes in the city. This topic is further elaborated in 'Milestone 0' (Critical stakeholder mapping). Source: WP1 team

Practical challenges for future visioning

While aforementioned issues of superficial participation, power imbalances and little incorporation of marginalised knowledge systems are problems often criticised in visioning and participatory planning more broadly, other aspects of a more practical nature also create constrains for meaningful experiences. A recent paper (30) that analysed the results from 62 visioning accounts in contexts of climate debates has found the following problems:

- Inadequate time allowance
- Inadequate tools, expertise, or visualisations
- Lack of literacy on the topic
- Lack of funding & support for recommendations
- Lack of quantitative data
- Uncertainty about the future hindering creative process
- Poor facilitation, setting and staging

Whilst Tomorrow's Cities focuses on disaster risk reduction - touching to some extent but not entirely on climate change debates -, all of these issues are worth commenting, as they might be faced by cities when preparing or implementing visioning activities.

First, it is important to acknowledge that issues such as field literacy are part of the very purpose of the Decision Support Environment as a whole. This means that stakeholders are expected to develop and deepen knowledge on risk as the DSE unfolds, and that future visioning only tackles this issue to some extent. Still, it is important that all activities include specific questions related to risk, to technical literacy is improved from the onset.

Logistical aspects such as lack of funding and data, skilled facilitation and time allowance inevitably rely on the context of each city and could not be generalised here. However, planning a realistic and detailed workplan for visioning, and managing expectations for the process with participants could help. In the activities proposed in this document, there are suggestions of timeframes and general guidance related to facilitation and choice of tools, materials and venue. All of these should be nonetheless unpacked and adapted to the specificities of each city and needs or desires of actors involved. For instance, cities should prepare the necessary material to be used in visioning exercises (e.g., maps and informative material) and develop strategies to deal with challenges such as data scarcity. Major decision (e.g., working with certain assumptions when data is an issue) should be communicated with transparency with participants and subject to contestations.

There is finally the issue of uncertainty about the future hindering creativity and imaginations. Whilst the stage of future visioning could hardly deal decisively with feelings and perceptions of uncertainty, it could ease such problem through the trajectory of activities.

The chosen trajectory for tomorrow's cities is not fixed, but strongly recommended because of this factor. It starts with broader discussions about aspirations – that touch on disaster risk but in a more superficial way – to then move to more negatively and practically charged discussions about barriers and drivers of risk, and the impacts of hazards. That is, discussions start with an emphasis on questions about how the city should be to only later move to discussions about how it could and will probably be based on ideas of risk. This helps to keep creativity and imagination alive, while not loosing track of the focus and scope of Tomorrow's Cities. Moreover, many of the methods that inspired such activities come from the arts or feminist and decolonial novel methodologies, which aim to trigger more subjective and creative discussions.

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(30) Nalau & Cobb, 2022.


ACTIVITIES TOOLBOX

Introduction to activities

Tomorrow's Cities approach to visioning is a trajectory composed of five milestones: (0) sorting disaggregated stakeholder groups; (1) developing shared visions and values; (2) spatialising and complicating visions in the face of risks; (3) outlining essential policies; and (4) curating and translating data with Work Packages 2 and 4.

Each milestone has been developed as an activity that entails different steps and that combines conventional and novel research methods from the social sciences, some of them drawing on decolonial and feminist approaches.

Whilst activities and their steps could be adapted, changed, or skipped depending on the particularities and timeframes of each city, the milestones are fixed and ensure consistency across the cities in the hub and a smooth transition from Work Package 1 (visioning) to other research work packages.

Numbers 0 and 4 are preparatory and transitional activities, to be carried by city teams with the support of the hub, but ideally with inputs from partners and stakeholders. Activities 1, 2 and 3 are to be carried with multiple stakeholders in a participatory manner.

At the introductory page of each activity are critical questions which express what must be captured by city teams. In many cases, each step also comes with an introductory question. The objective of this structure is to support cities, not only to develop activities, but also to monitor and evaluate their conduction. In this sense, even if cities change or skip steps, the questions should be somehow tackled if the future visioning approach is to be developed in an effective - in relation to the DSE - and meaningful way - in relation to the ethical principles of the project.

City teams should observe that by the end of each milestone there are expected products that disaggregated groups should deliver. Working with separate groups of stakeholders is a premise that guarantees that diversity will be incorporated into future visioning. Yet, plenary sessions to learn from different processes and products might also lead to interesting results.

Finally, it should be noted that each activity comes with recommendations of duration, format and other concerns such as the location of the venue and tools to be used. As each city context is unique, so should be the exact configuration of visioning. None of these activities are exact prescriptions. It is recommended that city teams draw on recommendations, but develop their workplans realistically, taking into account political and project timeframes, as well as issues such as participation fatigue. A workplan for future visioning with logistical and methodological decisions spelled out is highly advised.

Milestones & activities (summary)

0 Sorting disaggregated stakeholder groups

Activity: Conflictive stakeholder mapping

1 Developing shared visions and surfacing values

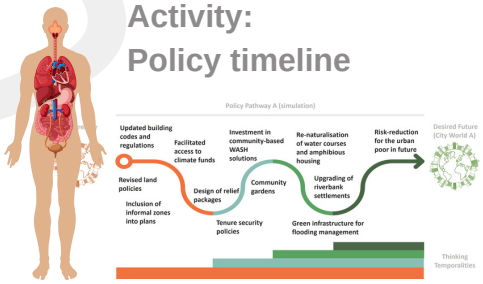
Activity: 'City World' Assemblage

2 Spatialising & complicating visions in the face of risks

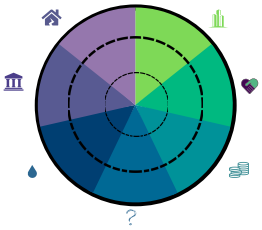
Activities: Body Mapping & Spatial Guidelines

3 Outlining policies

Activity: Policy timeline



4 Curating / translating data for other DSE stages



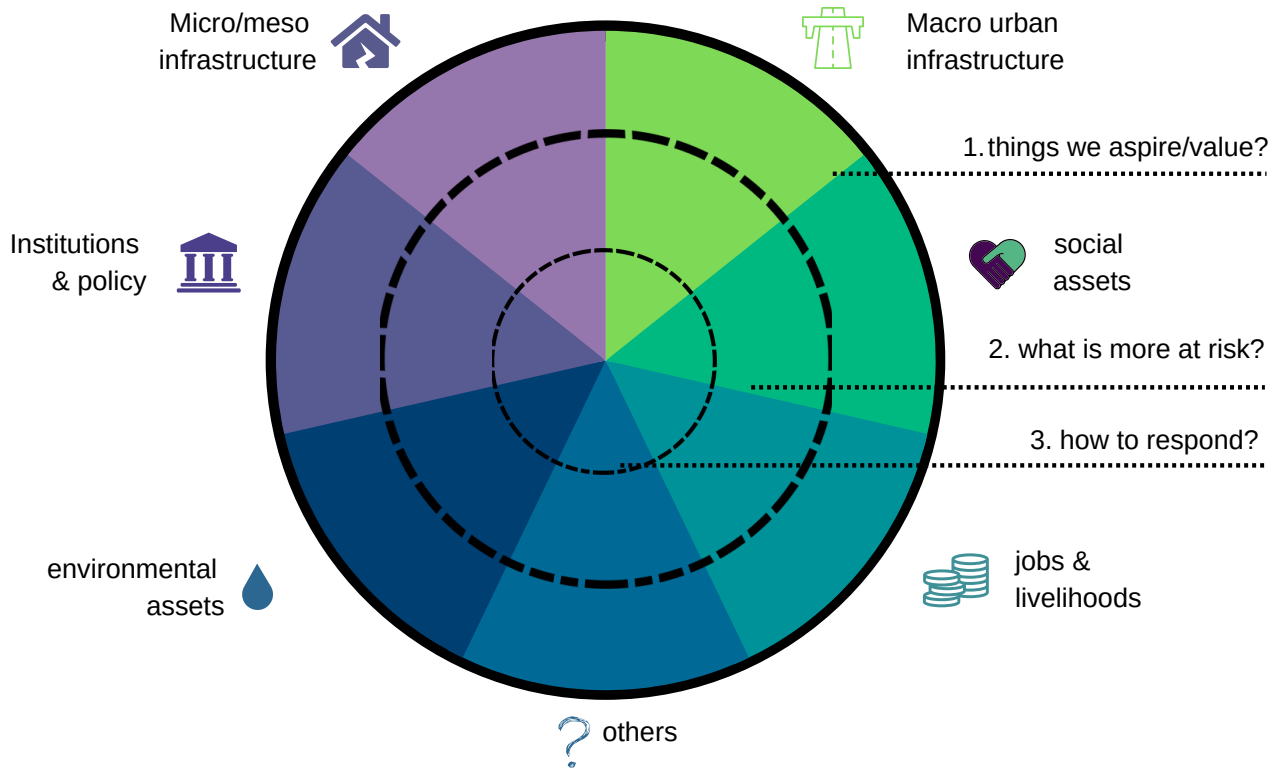
Infographic: Summary of proposed trajectory for future visioning (WP1)
Source: WP1 International team, 2022

Bringing ideas together

This is a wheel of urban dimensions and assets developed by the Work Package 1 team. It mixes common resilience and development analytical categories to produce seven dimensions. The objective of this tool is threefold. First, it is used to understand how sometimes abstract visions relate to different dimensions of urban life. By analysing their visions against the wheel, participants are able to see if they touched more on infrastructural assets or social assets. This helps to organise and refine visions. Second, this is an instrument to keep track of conversations throughout the whole visioning trajectory. As each milestone entails a set of products, important thoughts might be lost along the one. The wheel ensures that key points remain present and are revised in next steps.

Third, as discussions progress, the wheel becomes an instrument to prioritise information. Each disaggregated group will have its own wheel, and by the end of the trajectory it will become a summary of the key highlights and priorities from visions. That is, groups will be clear about: what are their key aspirations and values, what is more at risk from valued things, and how to take action to get closer to visions whilst minimising disaster risk.

In sum, the wheel (which could be translated as a table or matrix) is a key part of visioning, because it brings different discussions together while prioritising what is meaningful to participants. Pragmatically, it is also key for turning visions into visioning scenarios via GIS tools, which is the scope of Work Package 2. Moreover, the assets and values identified in the wheel could feed Work Package 2 through the creation of additional impact metrics or as a departure point for weighting metrics.



Sorting disaggregated groups

Activity: Conflictive stakeholder mapping

Summary: This activity aims to create disaggregated groups that represent the diversity of each city, with a focus on power imbalances and differential experiences of risk. It further contributes to unpack the umbrella term ‘urban poor’, recognising different marginalised groups to be empowered and legitimised through the DSE.

General recommendations

Duration: 1 month with synchronous and asynchronous interactions

Format: Transdisciplinary city team which increases as more actors are engaged. Activity could be done remotely with the help of digital collaborative tools or through a series of short in-person meetings.

Venues should be accessible to the stakeholders being contacted. Cities might wish to have discussions in neighbourhoods surrounding the project's focus area whilst mindful that risk is not spatially contained.

Critical Questions:

- Who should be involved in future visioning? Why?
- Who (i.e., groups, identities) is historically involved and marginalised in planning spaces and risk-related decision making?
- Considering the difficulty of representing all urban actors, which ones could best express power imbalances that shape the city?
- How is the overall assemblage of stakeholders improving pro-poor risk-informed planning?

Step 1 | Mapping Urban Stakeholders

Who comes to mind when you think of socio-spatial diversity within your city?

Think of social conditions shaped by urban processes (e.g., informal dwelling, property ownership, etc) and (intersectional) socio-spatial identities shaped by gender, race/ethnicity, age, class, and other factors. Name all relevant skateholders that come to mind.

This is a brainstorming stage and your team may map freely. Yet, questioning who is doing the stakeholder mapping is important. A homogenous team might end up producing a little nuanced stakeholder scoping.

Step 2 | Taking urban conflicts and power imbalances into account

How are power imbalances shaping the city and its planning processes?

Once diverse groups have been mapped, it is time to consider how power imbalances create urban conflicts and inequalities between groups. A good departure point might be to look at current deprived and/or marginalised spaces in the city, and ask who is systematically attached to these spaces and why. For instance, new migrants or ethnic minorities might occupy more significantly marginalised spaces than white and wealthy groups. Moreover, long-time city dwellers or those with full citizenship status might be more frequently included within decision-making spaces. Knowledge may also be an issue here. For instance, knowledge systems coming from indigenous or eastern identities might be less legitimised in planning institutions than western ways of thinking and identities.

In sum, more than a stakeholder map that merely lists diverse urban groups, this is a reflexive exercise which seeks to further unpack the umbrella term 'urban poor' and question the legitimacy of groups in decision-making. Whilst it might not be possible to represent all urban groups in future visioning, having at least some that somehow capture the profile of dominant and marginalised voices could be useful to harness different visions for the future.

Step 3 | Power imbalances in a context of disaster risk

Which dominant and disadvantaged groups are more relevant for a discussion about disaster risk reduction?

Each city is a complex system shaped by power in different ways. Your conflictive stakeholder mapping will not tackle all this complexity. It should rather aim to identify groups and sectors that, beyond evident choices, are relevant for disaster risk reduction. This could be done through engagements such as interviews or the analysis of pre-existing data. For example, you might have data showing that single mothers living in informal settlements are amongst those more impacted by flooding in your city or in a city similar to yours. This could lead to at least one group formed by this profile. Please note that approaching vulnerable groups should be aimed at questioning the way in which the city is planned and reproduced rather than attaching stigmas to already marginalised identities. Make sure to always justify your choices.

Step 4 | Activating Groups

Who is willing to engage in a co-production process?

Unpacking the urban poor and dominant groups in each city is essential to address some of the power imbalances that are systematically embedded in planning. Still, the identified groups should be willing to engage with the DSE, which entails a dialogue in which your team explains the workings of the framework and the importance of including diverse voices in it. In the case of marginalised groups, engagements could happen via established community or non-governmental organisations. Power imbalances within these groups might also be an issue to be considered.

Securing the presence of already legitimised groups (e.g., planning authorities) is also fundamental, so future visioning becomes a pedagogical process in which the values atached to different visions and the legitimacy of some over others can be unpacked and questioned collectively.

Whilst this form of stakeholder mapping aims to bring urban conflicts to the surface, it is crucial that the groups involved share the principle of co-production. This requires preserving social differences but still cooperating for the delivery of outcomes which all groups consider to be beneficial for the city in the long term.

Nb: During this stage, it is advised that city teams communicate their proposed disaggregated stakeholder groups to the organisations involved and allow spaces for participants to challenge choices and propose changes. As much as possible, share the rationale behind your choices with transparency.

Step 5 | Finalising Stakeholder Groups

How much diversity can your logistical structure take?

This is the final step when, having identified, contacted and dialogued with interested parties, city teams finalise their structure of disaggregated groups for future visioning. For purposes of simplification, we recommend that three to five groups are defined. Less than three stakeholder groups will probably generate an overly superficial participatory process. However, as each disaggregated group is producing at least one product per activity, having more than five future visioning processes and outputs would represent a time and logistical burden for the DSE. Cities should take into account their logistical capacity to engage in depth with each group.

Final Products

(1) One stakeholder map which includes notes or codes regarding power imbalances and inequalities. (2) A final structure with the composition of disaggregated groups with a brief justification – to be included in the workplan of each city team.

1 Developing shared visions

Activity: City World Assemblage

Summary: Each disaggregated group of participants will develop a 'city world', which is an encapsulated representation (i.e., drawing, collage) of a ‘good future city’ that comes with a brief statement describing such city. Each vision should contain features and processes. Embedded values should be discussed.

General recommendations

Between 4 and 8 hours

Workshops with disaggregated groups

Facilitator: experience with co-drawing/collage methods, basic notions of urban planning and disaster risk

Venue should be accessible to all groups.

Tools should be adapted according to each group's profile. For instance, some groups might be more comfortable speaking/recording a vision statement instead of writing it.

Critical Questions:

- What are the main aspirations of your group for the ‘good future city’?
- What this city has (features) and what it does to people and the environment (processes)?
- Which values are embedded in this vision?
- To what extent is this vision inclusive for poor and marginalised groups?

Step 1 | Introducing the DSE

What are the principles guiding the DSE and future visioning? What are the main objectives and expected outcomes?

If this is the first time that city teams are meeting with all the disaggregated groups of participants, the activity should start with a brief introduction to the DSE, in which main objectives and expected outcomes are clearly communicated. Participants might also be invited to share their own objectives and expectations, which should be recorded/tracked by facilitators. In some contexts, it might be interesting to conduct this activity in a plenary session, so groups are aware of each other. However, once the core of the activity (city worlds) starts, it is important that groups are broken into disaggregated teams so different visions are harnessed and marginalised voices are not overshadowed in the process.

Step 2 | Individual aspirations

How is a 'good day' in your ideal city? What is this city offering or allowing you to do?

The 'city world' activity starts here. First, participants are given a few minutes and invited to individually imagine a good day in their ideal city. What would they do? What would the city and its institutions or spaces offer to them? Stakeholders might also be prompted to think of a good ‘normal day’ and a good ‘special day’ to enrich reflections. Taking notes or sketching ideas might be helpful for some groups but intimidating for others. Asking participants to just think about this individual good city should be enough at this point.

Step 3 | Collective future aspirations

What could the good future city offer your descendants, or someone in a similar position to yours?

Participants now work towards a collective future vision. As in storytelling research methods Facilitators may prompt each person to start by summarising their individual ‘good day’, so it is possible to identify similarities and differences across the group. Stakeholders are further invited to think of a good city for their descendants, or someone in the future who will experience that city in a similar way as they would. For example, if the

group is mostly composed of migrants, facilitators may ask how could this future city be better for a newly arrived urban resident. This aims to enrich reflections, although the final product is of free format.

At this point, it is important that a lead in each group or a facilitator take note of the main components of the vision, that is, the main features, activities and processes that shape the collective ideal city of the future.

Step 4 | Assembling the city world

How would you visually represent and describe your group's aspired city?

Once the key components of a collective vision have been identified, participants will now build a synthesis of their vision through two main products: a drawing or collage of a 'city world', and a vision statement. The drawing visually represents/suggests what the city has – e.g., infrastructural components, environmental assets-, whilst statements describe things, processes and relations.

The tools and materials used to conduct this exercise may vary depending on the profile and skills of both participants and facilitators. For instance, city teams might provide a few images in advance that could be used for collages, and what cannot be represented in a collage could be done so through drawings. In some cases, participants may only describe the vision, which would be drawn by facilitators. The important thing is that the main elements of the vision are represented both as a visual and written synthesis. This two-folded output helps visions to be further translated into tangible proposals (e.g., spatial plans) and less tangible actions (e.g., policy).

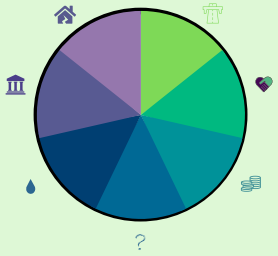
City teams should consider how to adapt this exercise for groups with special needs. For example, people with visual or motor impairments might need particular tools or robust support from facilitators. Likewise, children might be familiar with drawing, but will need support to unpack and translate drawings into a statement.

Step 5 | Collating & unpacking values

Is your city world touching on different dimensions of urban life? Why do you value these things/processes?

With the help of facilitators, disaggregated groups will collate their aspirations into a framework that shows different urban dimensions. At this point, it should be used to track aspirations and tease out values. Participants will also visualise if there are any gaps in their visions and what dimension best represents it.

For instance, if 'accessible public spaces' have been prioritised in the wheel, participants may justify that they placed this item in the social dimension because they want a place for children to play. Understanding why something is aspired is key to surface values and the reasoning behind priorities.



Step 6 | Revisiting & Sharing Visions

If you could revisit your city world, would you add or change anything? What is interesting about other city worlds?

If time allows, participants might be given an opportunity to revisit their city worlds and add or change things. If the exercise started with a plenary session or with a larger group, there might also be an opportunity to share visions and learn from the experience of others. City teams should evaluate if this is appropriate. There is a trade-off between learning from different visions and conditioning imaginations for alternative city worlds.

Final Products

(1) One drawing or collage, (2) one vision statement, and (3) one wheel tracking the key elements of each vision with notes on their corresponding values

2 Spatialising & complicating visions

Activity: Body Mapping & Co-designing

This activity aims to turn more conceptual visions into qualitative spatial translations (not yet plans) that are complicated by socio-urban trends and multi-hazard risk. Based on their values and aspirations, stakeholders will provide guidelines for the elaboration of plans that are both desirable and plausible.

General recommendations

Between 1 and 2 days

Workshops with disaggregated groups

Facilitator: experience with co-drawing, mapping and design methods, basic notions of risk-informed planning

Venue should be accessible to all groups.

This activity requires a printed body contour and a simplified map of the city where the focus area and its key pre-existing features are shown. The use of GIS tools might be beneficial.

Critical Questions:

- Which elements from your vision should/can be translated into qualitative spatial guidelines?
- What adaptations or additions are needed in light of multi-hazard risks?
- How are your key aspirations and values guiding such translation?

Step 1 | Recalling previous products

Ideally, the same composition of stakeholder groups will be conducting this activity, so the thinking trajectory required for future visioning is preserved. Because new participants might be present and others might not vividly recall discussions, facilitators may start by revisiting the outputs from the past session, namely the city world drawing, the statement and the wheel of assets.

Step 2 | Body Mapping

Imagine your 'city world' as a body. How would you translate the characteristics of your city into this body-map? E.g., What does this body need to survive (major organs and systems)? What is not vital but contributes to this body's welfare?

Such activity emerges from novel feminist and decolonial methods, and could help participants to elaborate conceptual aspirations and values in spatial terms and in relation to assets' functions in a complex urban system – this without having to navigate complex real maps that might constrain aspirations. For instance, stakeholders may aspire for a future city with plenty of livelihood and job opportunities for their descendants. Body mapping thus might to the shared understanding that the local market or harbour is 'the heart' of the city-body, which is something to be boosted and/or protected through both spatial plans and policy. This is a guideline for plans and not a spatial proposal per se. Still, thinking of the city as a body enables stakeholders to reflect on necessary features and processes that might not have been brought up during the past exercise, or to develop their visions in more depth.

Nb: City teams should evaluate if working with a body map is appropriate to all groups and contexts. In some cases, it might be more helpful to work with a real map and identify valued and needed, checking for gaps between current and aspired assets.

Step 3 | Discussing the focus area

This step requires that facilitators or experts with sufficient knowledge of the land to be developed explain its main characteristics using a simplified map, which could be GIS-based. For example, pre-existing constructions and zoning,

landmarks and environmental assets might be shown. Some contextualisation on existing building regulations may also be needed.

At this point, it is recommended that facilitators present some trends and data that speak about the probable future for that area or the city more broadly. They could, for instance, show future hazard maps or demographical trends. This will help participants to make a more thoughtful transition from broad aspirations to spatial guidelines.

Step 4 | Finalising spatial guidelines

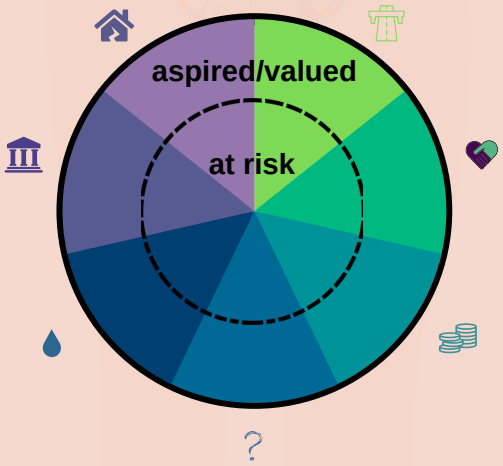
What are the some of the spatial guidelines needed to materialise key aspects of your vision?

With the help of facilitators, facilitators will move from the body map to a list of spatial guidelines using again the wheel of assets as a support. It is recommended that the GIS team is present during this process to ensure a smooth transition from Work Package 1 to 2.
The objective of this activity is to provide guidance for future plans that are strongly underpinned by the values teased out in the previous exercise. That is, rather than a random exercise of listing facilities and infrastructures, people will need to elaborate why certain things are desired and undesired, what needs to be closed to what and, more importantly, why do these assumption matter – how they are connected to the values?
Drawing on previous examples, if participants listed that public open spaces are needed (as the 'lungs' of the city', they might further elaborate that these are needed close to living areas, whilst designed to endure hazards such as flooding (through more green coverage, for example). If they listed that low-income housing is needed, they might elaborate how dense or high should there areas be considering demographic growth trends. Further, if they find that the markets are the 'heart' of the city, they might want spread, dense and lively commercial areas.
The point of this step is not to arrive at an ideal spatial plan. This step uses the spatial values from the body map as an entry point to justify issues of spatial presence, spatial protection, proximity, distance and form. Some elements of the vision might be accepted 'as long as they are there somewhere', while others 'must be close to something'. Explaining why these guidelines speak to values is the essential aspect to be worked.

Step 5 | Coming back to the wheel

What do we aspire and value more in the city? What is more at risk?

At this final stage, the wheel of assets will be used again. Now, not only to keep track of the elements from visons, but to prioritise them in relation to disaster risks. After having developed a set of key spatial guidelines, participants should go back to their wheel and answer: what is aspired and valued? From current (valued) and aspired assets, what is more at risk? This helps visions to incorporate predictive and exploratory thinking into normative views.



Final Products

(1) One body map, (2) one set of spatial guidelines with notions of presence, protection, erasure, proximity, distance and urban form, (3) one revised wheel of urban dimensions and assets

3 Outlining essential policies

Activity: Policy timeline

Participants are invited to reflect on aspirations or responses to risk that could not be translated into spatial terms or that require complementary policy actions. They also deepen their understanding of disaster risk through a discussion of drivers, root causes and consequences of risk.

General recommendations

Between 1 and 2 days

Workshops with disaggregated groups

Facilitator: experience with co-drawing, mapping and design methods, basic notions of risk-informed planning

Venue should be accessible to all groups.

All products from past activities should be printed in a large format and brought up to the discussion. An empty wheel or table with urban dimensions should also be available.

Critical Questions:

- Which actions are required to bring your current city closer to your ideal future city?
- Which are the roots of the hazards impacting your city and how to tackle them?
- Which stakeholders could make those actions real or are responsible for dealing with these issues?
- Which actions are more urgent? Which ones require more time? And which ones are pre-requisites for long-term actions?

Step 1 | Body-map (re)discussion

What are the most sensitive or vulnerable parts of your body-map? What are the root causes of disease in your body and disaster risk in your real city (which will probably reverberate towards the future)? Which actions are needed to tackle major problems and who should implement them? What is more urgent and what is needed in the long run?

Following spatial guidelines - developed in the past exercises, this stage focuses on outlining policies that help to realise or support visions – to be further detailed throughout the DSE. To provide a sense of continuity to participants, the discussion starts with the body map and wheel delivered in the past exercise.

Both products are put side by side on a table or wall. As the questions at the top of this step indicate, facilitators may start by providing prompts related to the manifestations, drivers and root causes of disasters and vulnerability to hazards. The objective is to identify critical spaces, infrastructures or facilites needed or exposed. Revisiting the body-map will help to improve the wheel of assets.

Step 2 | Wheel completion

(1) What do we aspire and value? (2) What is more at risk? (3) How to respond?. Complete in the wheel of urban dimensions and assets.

At this point, participants should be comfortable working with the wheel of urban dimensions and assets. This step is just about finalising it.

That is, stakeholders will finish answering and prioritising questions about aspirations and exposure, and will begin to formulate actions that complement their visions or contribute to their realisation.

Although speaking to a relatively bounded plot of land (the focus area to be worked as part of the DSE), policy actions are nonetheless connected to wider governance dynamics and larger scales, so it makes sense that participants discuss existing regulations and other city spaces

and relations.This is a brainstorming session, and it is not expected that participants develop policies in depth. Facilitators should only stimulate a few ideas on what should be done to pursue visions and respond to the more predominant hazards and other perceived risks that emerge from or connect to those hazards.

If the framework is a wheel (as in this Toolbox), it is recommended that different questions are separated by rings. For instance, aspirations could be placed in the outer rings whilst notions of exposure and outlined policies could be placed in the inner rings. Another option is to develop a matrix in which dimensions and questions are turned into columns and rows.

Step 3 | Policy timeline

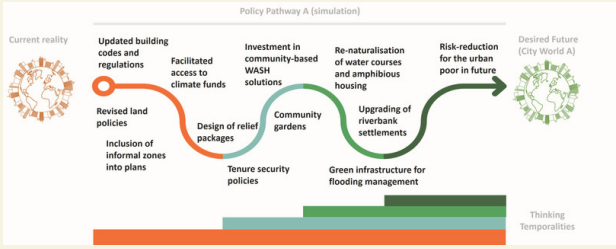
<u>What actions and decisions are needed for you to get closer to your aspired future? How is disaster risk creating barriers to your aspirations? Who should implement these actions? Which ones are more urgent and which ones need more time? What needs to be changed so these actions are effective?</u>

The future visioning stage of the DSE finishes with a policy timeline, which could be as simple as a listing of short-, medium- and long-term actions that speak to the collective rough plan produced by each disaggregated group, or a more complex timeline or roadmap indicating incremental actions in time, responsible actors, needed changes in regulation and different scales involved.

The complexity of the discussion will depend on the time available, the skills of facilitators, and the willingness of stakeholders to engage with those questions. Some these debates could be retaken in Work Package 4. The important is that, during future visioning, participants are instigated to think of how their aspired future is constrained by probabilities and possibilities (DRR-related), and how different courses of action entail activating different actors and changing existing norms and regulations.

Whilst it is expected that the pathway that connects the desired to the current future may speak to different dimensions of urban life, facilitators should try as much as possible to keep conversations focused on issues of risk and disaster risk reduction.

The timeframe for each exercise should be discussed in advance by city teams and relate to the political and planning timings of that urban environment.



Final Products

(1) collation tool identifying aspirations, exposure data and policy outlines, and (2) one policy timeline containing at least short-, medium- and long-term actions that connect aspired futures to the current reality.

4 Curating & translating data

Activity: Task force

Ideally, a task force composed of city teams, leads from different WPs and representative individuals from stakeholder groups will analyse the products and decide how to move forward with the DSE.

General recommendations

1 day (to agree on the essentials)

Task force with city teams, hub & representative stakeholders

May happen remotely or in-person

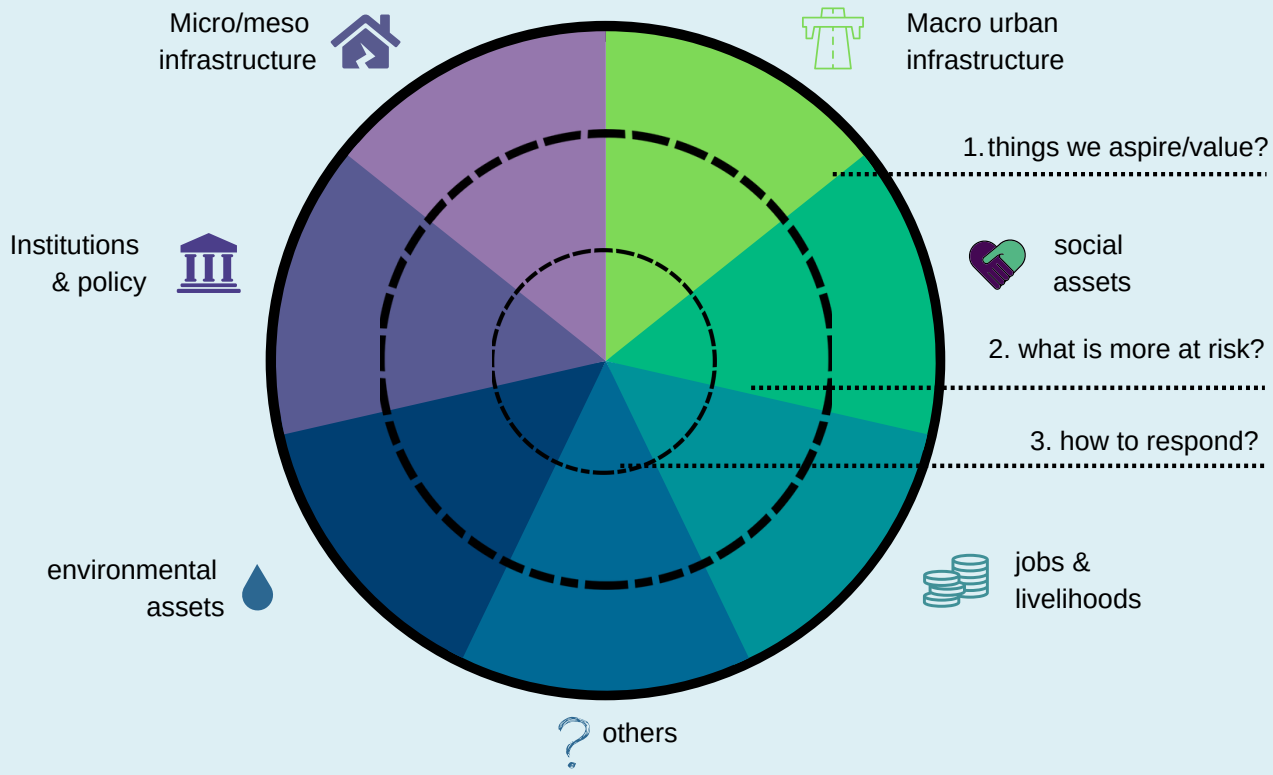
All products from past activities should be available for discussion

This milestone is not exactly translated as an activity, but as an expectation that diverse individuals will be involved in the process of translating the products from Work Package 1 into data and views that feed Work Packages 2, 3 and 4.

As much as possible, representatives from stakeholder groups should be present in key discussions, so to guarantee that the translation of visions into plans and policy is fair to the overall process. Many activities within future visioning have been designed to facilitate such translation, but it is possible that some gaps persist or that changes are needed.

The priority is that key values and aspirations remain attached to plans as the DSE progresses, and that the pedagogical ethos of the hub is not lost once plans delve into a computational stage.

Having some sort of conceptual tool that keeps track of and collates visions is essential in this sense. Such tool ought to indicate which ideas come from each stage of visioning and from each group. In the suggestion below, each ring of the wheel would represent an activity, and each disaggregated group would have its own wheel. Other strategies are nonetheless possible and encouraged if cities consider them more suitable to the local context.



MONITORING & EVALUATION

Monitoring & Evaluation

This toolbox assumes that all cities across the hub commit to the conduction of participatory practices that are critical pedagogical. In this context, this means fostering a learning environment which values exchanges between different knowledges and views towards a critical assessment of disaster risk, its root causes, drivers, and consequences. In a nutshell, it is expected that stakeholders finish DSE iterations having been exposed to difference, and that they ultimately think differently about risk and risk-informed planning in their cities. This is one - but not the only - expected impacts of Tomorrow's Cities.

Future visioning is the first moment to engage with stakeholders, which is why it is so important that activities embrace this pedagogical ethos. As previously mentioned, cities are welcome to engage with this toolbox in the way they see fit. It is encouraged that the overall trajectory, milestones and main outputs are addressed by all cities to ensure consistency. Yet, particular steps and tools might be adapted in relation to context specificities.

Because this is an open methodology, there is no single way to monitor and evaluate it. Yet, it is highly recommended that cities design monitor and evaluation tools, which could be as simple as surveys to be conducted throughout or at the end of future visioning stages or more complex feedback spaces. It is also recommended that both city teams and facilitators and participants engage in evaluation exercises, which could be designed differently depending on the profile of the groups and objectives of the evaluation.

In any case, we advise that monitoring and evaluation tools are divided in at least two parts. First, they should check if the pedagogical ethos and overall objectives of visioning have been met. These could be general questions that touch on the diversity of stakeholder groups and on the perception of learning and capacity building from activities. Second, evaluation tools should check if and how the key milestones in the trajectory where met. This is one of the reasons why the activities in this Toolbox were designed departing from questions.

Such questions work both as encapsulations of the message behind key steps of visioning, and as a way to monitor and evaluate each step or activity. For example, here are the key questions for Milestone 0:

- Who should be involved in future visioning? Why?
- Who (i.e., groups, identities) is historically involved and marginalised in planning spaces and risk-related decision making?
- Considering the difficulty of representing all urban actors, which ones could best express power imbalances that shape the city?
- How is the overall assemblage of stakeholders improving pro-poor risk-informed planning?

These four methodological questions could be turned into one evaluation question. Cities could ask to participants, for instance, *how inclusive was future visioning, considering the goal of including historically marginalised groups and influencing powerful decision-makers.*

In other to produce less fatiguing monitoring and evaluation tools, each activity could be translated as a question, which would lead to one or two general questions and five specific questions (one per milestone).

References

Arnstein, S. R. (1969). A ladder of citizen participation. Journal of the American Institute of planners, 35(4), 216-224.

Ballard, R., Dittgen, R., Harrison, P., & Todes, A. (2017). Megaprojects and urban visions: Johannesburg's Corridors of Freedom and Modderfontein. Transformation: Critical Perspectives on Southern Africa, 95(1), 111-139.

Balug, K. (2019). The imagination paradox: Participation or performance of visioning the city. Geoforum, 102, 278-286.

Bizikova, L., Burch, S., Robinson, J., Shaw, A., & Sheppard, S. (2011). Utilizing participatory scenario-based approaches to design proactive responses to climate change in the face of uncertainties. In Climate change and policy (pp. 171-190). Springer, Berlin, Heidelberg.

Castan Broto, V., Ortiz, C., Lipietz, B., Osuteye, E., Johnson, C., Kombe, W., ... & Levy, C. (2022). Co-production outcomes for urban equality: Learning from different trajectories of citizens' involvement in urban change. Current Research in Environmental Sustainability, 4, 100179.

Chakraborty, A., Kaza, N., Knaap, G. J., & Deal, B. (2011). Robust plans and contingent plans: Scenario planning for an uncertain world. Journal of the American Planning Association, 77(3), 251-266.

Davis, D. E., & Hatuka, T. (2011). The right to vision: A new planning praxis for conflict cities. Journal of Planning Education and Research, 31(3), 241-257.

Dixon, T., Montgomery, J., Horton-Baker, N., & Farrelly, L. (2018). Using urban foresight techniques in city visioning: Lessons from the Reading 2050 vision. Local Economy, 33(8), 777-799.

Dreborg, K. H. (1996). Essence of backcasting. Futures, 28(9), 813-828.

Duinker, P. N., & Greig, L. A. (2007). Scenario analysis in environmental impact assessment: Improving explorations of the future. Environmental impact assessment review, 27(3), 206-219.

Freire, P. (2020 [1968]). Pedagogy of the oppressed. In Toward a Sociology of Education (pp. 374-386). Routledge.

Gaffikin, F., & Sterrett, K. (2006). New visions for old cities: The role of visioning in planning. Planning Theory & Practice, 7(2), 159-178.

Galasso, C., McCloskey, J., Pelling, M., Hope, M., Bean, C., Cremen, G., ... & Sinclair, H. (2021). Risk-based, Pro-poor Urban Design and Planning for Tomorrow's Cities. International Journal of Disaster Risk Reduction.

Harrison, P. (2006). On the edge of reason: Planning and urban futures in Africa. Urban Studies, 43(2), 319-335.

Iwaniec, D. M., Cook, E. M., Davidson, M. J., Berbés-Blázquez, M., Georgescu, M., Krayenhoff, E. S. & Grimm, N. B. (2020). The co-production of sustainable future scenarios. Landscape and Urban Planning, 197, 103744.

John, B., Keeler, L. W., Wiek, A., & Lang, D. J. (2015). How much sustainability substance is in urban visions? An analysis of visioning projects in urban planning. Cities, 48, 86-98.

Kapoor, I. (2002). Deliberative democracy or agonistic pluralism? The relevance of the Habermas-Mouffe debate for third world politics. Alternatives, 27(4), 459-487.

Legacy, C., Metzger, J., Steele, W., & Gualini, E. (2019). Beyond the post-political: Exploring the relational and situated dynamics of consensus and conflict in planning. Planning Theory, 18(3), 273-281.

Lemp, J. D., Zhou, B., Kockelman, K. M., & Parmenter, B. M. (2008). Visioning versus modeling: Analyzing the land-use-transportation futures of urban regions. Journal of Urban Planning and Development, 134(3), 97-109.

Listerborn, C. (2017). The flagship concept of the '4th urban environment'. Branding and visioning in Malmö, Sweden. Planning Theory & Practice, 18(1), 11-33.

Lord, S., Helfgott, A., & Vervoort, J. M. (2016). Choosing diverse sets of plausible scenarios in multidimensional exploratory futures techniques. Futures, 77, 11-27.

Marx, C. (2011). Long-Term City Visioning and the Redistribution of Economic Infrastructure. International journal of urban and regional research, 35(5), 1012-1025.

McCann, E. J. (2001). Collaborative visioning or urban planning as therapy? The politics of public-private policy making. The Professional Geographer, 53(2), 207-218.

Nalau, J., & Cobb, G. (2022). The strengths and weaknesses of future visioning approaches for climate change adaptation: A review. Global Environmental Change, 74, 102527.

Pløger, J. (2004). Strife: Urban planning and agonism. Planning Theory, 3(1), 71-92.

Ratcliffe, J., & Krawczyk, E. (2011). Imagineering city futures: The use of prospective through scenarios in urban planning. Futures, 43(7), 642-653.

Robinson, J. (2008). Developing ordinary cities: city visioning processes in Durban and Johannesburg. Environment and Planning A, 40(1), 74-87.

Sandercock, L. (Ed.). (1998). Making the invisible visible: A multicultural planning history (Vol. 2). Univ of California Press.

Sheppard, S. R., Shaw, A., Flanders, D., Burch, S., Wiek, A., Carmichael, J., ... & Cohen, S. (2011). Future visioning of local climate change: a framework for community engagement and planning with scenarios and visualisation. Futures, 43(4), 400-412.

Shipley, R. (2000). The origin and development of vision and visioning in planning. International Planning Studies, 5(2), 225-236.

Shipley, R. (2002). Visioning in planning: is the practice based on sound theory?. Environment and planning A, 34(1), 7-22.

Shipley, R., & Newkirk, R. (1999). Vision and visioning in planning: What do these terms really mean?. Environment and Planning B: Planning and Design, 26(4), 573-591.

Shipley, R., Feick, R., Hall, B., & Earley, R. (2004). Evaluating municipal visioning. Planning Practice and Research, 19(2), 195-210.

Uwasu, M., Kishita, Y., Hara, K., & Nomaguchi, Y. (2020). Citizen-participatory scenario design methodology with future design approach: A case study of visioning of a low-carbon society in Suita city, Japan. Sustainability, 12(11), 4746.

Uyesugi, J. L., & Shipley, R. (2005). Visioning diversity: Planning Vancouver's multicultural communities. International Planning Studies, 10(3-4), 305-322.

van Vliet, M., & Kok, K. (2015). Combining backcasting and exploratory scenarios to develop robust water strategies in face of uncertain futures. Mitigation and adaptation strategies for global change, 20(1), 43-74.

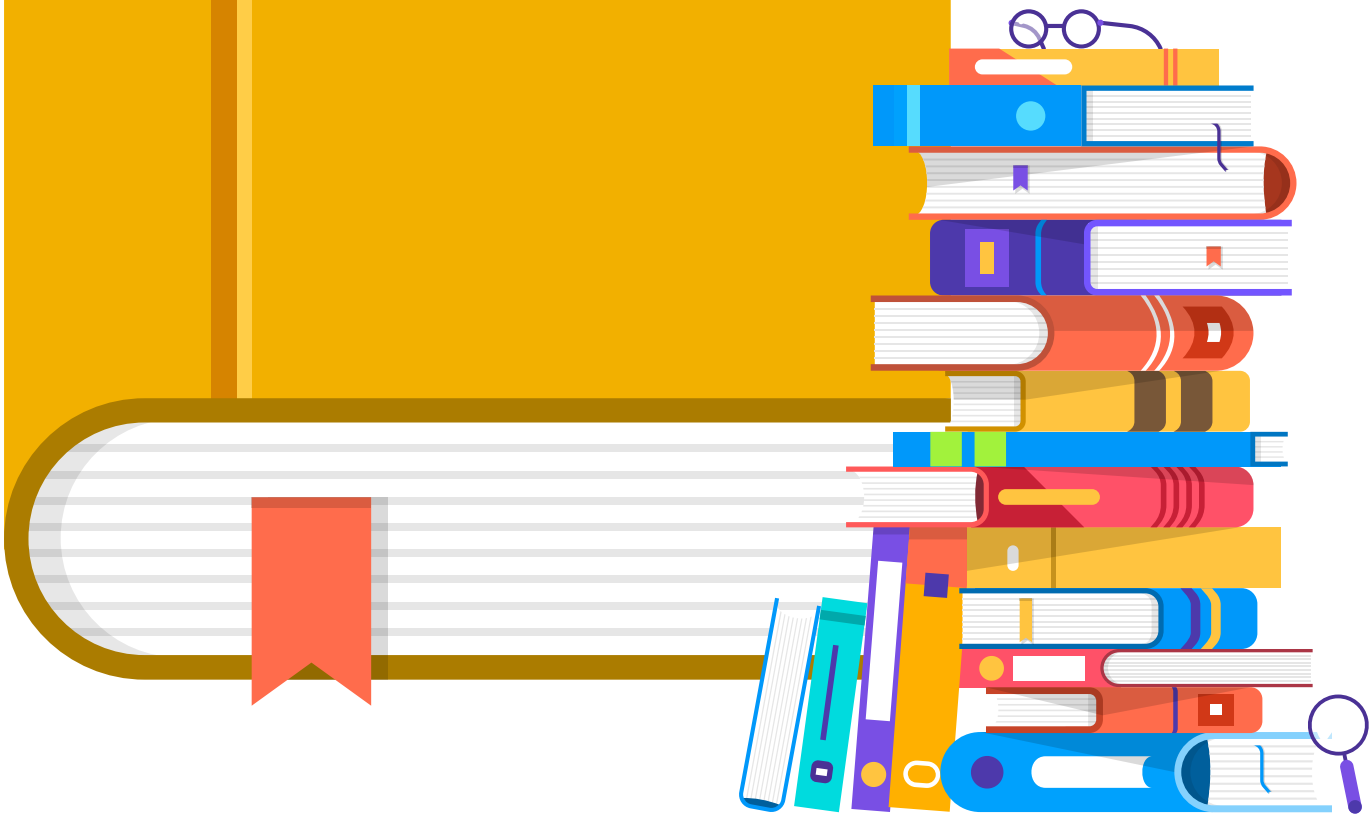
Watson, V. (2014). African urban fantasies: dreams or nightmares?. Environment and Urbanization, 26(1), 215-231.

Wilkinson, A., & Eidinow, E. (2008). Evolving practices in environmental scenarios: a new scenario typology. Environmental Research Letters, 3(4).

Wragg, E., & Lim, R. (2015). Urban visions from Lusaka, Zambia. Habitat International, 46, 260-270.

Annex 1

GLOSSARY



Glossary

This Glossary explains some key terminology used in the document. The definitions below refer to Tomorrow's Cities approach to Future Visioning and are not to be understood as universal concepts.

Backcasting: Umbrella method which usually implies defining a future desired or aspired end-state in the future and then tracing a trajectory to the present moment. It is largely (but not exclusively) associated with qualitative future methods.

City Worlds: Visual representation that synthesises collective social norms and aspirations for a city - how it should be. It does not refer to a specific geographical scale although it might use a scale as a reference for discussions.

Co-production: In planning and urban studies literature, co-production is an umbrella term which encompasses diverse processes and strategies that entail a temporary or ongoing partnership between state and non-state actors to produce tangible goods for cities and people, such as housing or infrastructure. The term implies some degree of ownership of such goods by non-state actors, usually communities, NGOs, social movements, or grassroots groups.

Ethos: Refers to the values and principles guiding something and shaping its character.

Forecasting: Umbrela method which is quantitative data-driven. Usually relies on past trends and observable trajectories from the past to the present to then make assumptions about a probable future.

Normative: Used in this document in relation to discourses, statements, views, and visions. Relates to ethical perceptions and aspirations - ideas about how the world (or life, the city) should be.

Policy Pathways: Alludes to the role of policies to build trajectories with incremental steps from the present towards a diversity of desired and possible futures.

Urban Poor: Used here as an umbrella term that alludes to, not only income, but also diverse conditions and experiences of socio-spatial vulnerability, marginalisation, precarity and exclusion from the city and its planning and decision-making spaces.

Scenarios: Summary representations of futures. Usually appear as a description of an end state according in relation to a particular time frame.

Vision: An encapsulated or synthesised idea of a future - usually (but not always) a desired or aspired one.

Visioning or Future Visioning (used interchangeabily in Tomorrow's Cities): A methodology and/or process of collectively imagining futures that, whilst grounded on reality and possibly informed by predictions or explorations, speak to normative views and ethical assumptions.

Visioning exercises or activities: usually one-off or more temporary engagements that aim to produce future visions.

Visioning scenarios: The translation of visions into proposals that entail spatial and policy components.

Vision Statements: Short writings that explain visions, usually describing key features, processes and relations that shape them.